

B. TRANSITIONING N1-2 TO PRIMARY FROM OFF/DIAGNOSTIC/STANDBY WHILE N1-1 IS PRIMARY

1. VERIFY MDM STATES
PCS1 Node 1: C&DH: MDM N1-1
PRIMARY NCS MDM Node 1
- √STATE - Primary
√MDM ID - N1-1
- If N1-2 is Off, go to step 2.
If N1-2 is in Diagnostic state, go to step 3.
If N1-2 is in Standby state, go to step 5.
2. IF N1-2 IS INITIALLY OFF, BRING IT TO STANDBY
PCS1 Node 1: C&DH: MDM N1-2
SECONDARY NCS MDM Node 1
'RPCM _N1RS2_C'
- sel RPC 13 (Nod1_2_MDM)
- RPCM _N1RS2_C_RPC_13 Detail
- √Position - Op
sel Commands
cmd Close **Execute**
√Position - CI
- Wait at least 90 seconds for MDM to start up, finish POST, and go to Standby State.
- Go to step 4.
3. IF N1-2 IS INITIALLY IN DIAGNOSTIC STATE, BRING IT TO STANDBY
PCS1 Node 1: C&DH: MDM N1-2
SECONDARY NCS MDM Node 1
- √Frame Count - <static>
- PCS1 Node 1: C&DH: MDM N1-1
PRIMARY NCS MDM Node 1
'Software Control'
- sel Transmit Mode Code
- Primary_NCS_Transmit_Mode_Code

sel Primary NCS Xmt Mode Code Commands
cmd Xmt_Stat_Word_Tmplt
 enter Bus ID - 2
 enter RT Address - 5 **Execute**
 √Subsystem Flag Set - X (set)

If Subsystem Flag Bit is set, N1-2 MDM is in Diagnostic State and is ready to accept diagnostic commands.

PCS1

Node 1: C&DH: MDM N1-1

PRIMARY NCS MDM Node1

'Software Control'

sel MDM Utilities
 sel Commands

NOTE

1. Check with **MCC** for which command to send (reinit from DRAM or EEPROM).
2. For DRAM Reinitialization
 Startup process will execute from the UAS currently loaded in DRAM.
 No POST is performed.
3. For EEPROM Reinitialization
 Reinitialize MDM from EEPROM will cause the loss of all current information in the DRAM such as BST, current Bus, RT, and application configurations.
 All UAS and default Configuration Tables will be loaded from EEPROM.
 Normal POST will be performed.

If reinitialize from DRAM

cmd N1_2_MDM_Re_Init_MDM_DRAM **Execute**

If reinitialize from EEPROM

cmd N1_2_MDM_Re_Init_MDM_EEPROM **Execute**

Wait 60 seconds for MDM to reinitialize.

PCS1

Node 1: C&DH: MDM N1-2

SECONDARY NCS MDM Node 1

√Frame Count - <incrementing>

'MDM Major State:'

√STATE - Standby

√MDM ID - N1-2

 * If state is not Standby, √MCC *

PCS1 4. VERIFY N1-2 IS IN STANDBY STATE

Node 1: C&DH: MDM N1-2

SECONDARY NCS MDM Node 1

√Frame Count - <incrementing>

'MDM Major State:'

√MDM State - Standby

√MDM ID - N1-2

PCS1 5. COMMAND N1-1 TO SECONDARY, (N1-2 SHOULD GO TO PRIMARY)

Node 1: C&DH: MDM N1-1

PRIMARY NCS MDM Node 1

NOTE

1. Sending the following command will cause the loss of PCS1, Early COMM, and OIU telemetry until OIU reconfiguration and PCS2 reconnection are done.

2. Possible PDI DECOM Fail message.

'MDM Major State:'

sel Commands

cmd N1-1_MDM_Xsitrn_Second_State Execute

√Frame Count - <static> (loss of PCS1 telemetry)

N1-2 should go to Primary in 20 seconds.

PCS2 6. TELEMETRY RECOVERY ON PCS2

After boot up when taskbar appears at bottom of display

sel Arrow directly above "PCS" logo

sel Start/Restart PCS CDS

sel Icon to open PCSCDS Main Control Panel Window

√Status Box is Green and 'Connected' is displayed in the PCS CDS Main Control Panel Window.

NOTE

PCS connection to MDM is indicated by 'Green' in the Status Box and/or 'Connected' message displayed in the PCS CDS Main Control Panel Window.

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*****
*   If Status Box is not Green, select 'Connect to MDM' icon   *
*   to reconnect.                                              *
*   If still no joy, close all displays and all iconified items and *
*   repeat this step.                                          *
*                                                                *
*   √MCC if Status Box is still not green.                    *
*****

```

PCS2 7. VERIFY N1-2 IS PRIMARY AND N1-1 IS SECONDARY
 Node 1: C&DH: MDM N1-2
 PRIMARY NCS MDM Node 1

√Frame Count - <incrementing>

'MDM Major State:'

√MDM ID - N1-2

√MDM State - Primary

PCS2 Node 1: C&DH: MDM N1-1
 SECONDARY NCS MDM Node 1

√Frame Count - <incrementing>

'MDM Major State:'

√MDM ID - N1-1

√MDM State - Secondary

```

*****
*   *****
*   If States are not correct or no N1-2 TLM   *
*   *****
*   √MCC                                     *
*   *****

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8. TELEMETRY RECOVERY ON EARLY COMM (GROUND ONLY)

<p style="text-align: center;"><u>NOTE</u></p> <p>Early COMM should reconnect to N1-2 MDM on the other Orb bus automatically in about 10 seconds after N1-2 MDM becomes Primary.</p>
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Node 1: C&DH: MDM N1-2
 PRIMARY NCS MDM Node 1

√Frame Count - <incrementing>

'MDM Major State:'

√MDM ID - N1-2

√MDM State - Primary

* ***** *

* If Frame Count is Static after 20 seconds from the *

* moment N1-2 becomes Primary (no Early COMM *

* telemetry received), √MCC *

* ***** *

9. TELEMETRY RECOVERY ON OIU

<p style="text-align: center;"><u>NOTE</u></p> <p>Possible PDI DECOM Fail message.</p>
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CRT

SM 212 OIU

BUS 3 BC - ITEM 11 EXEC

BUS 4 RT - ITEM 14 EXEC

Change OIU N1 Physical Device to N1-2 - ITEM 18 +3 EXEC

CRT

Reload OIU FORMAT 2 - ITEM 1 +2 EXEC

CRT

SM 210 NODE

√PHY ID PRI MDM - N1-2

√STATE - PRI

√FAIL - <blank>

√FRM CTR - <incrementing>